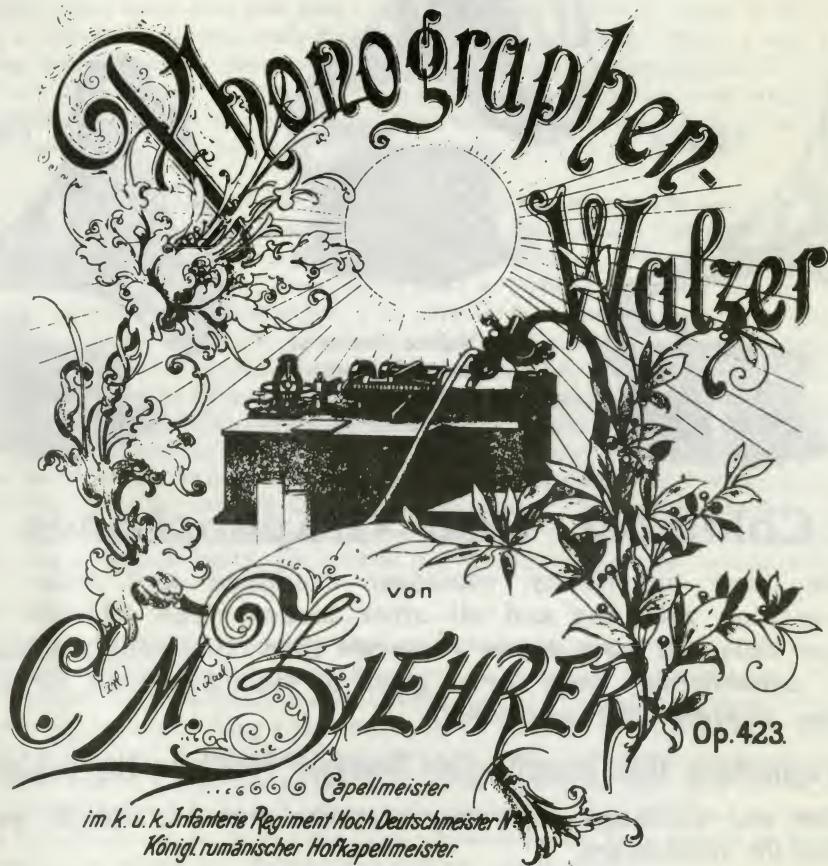


THE HILLANDALE NEWS

NOVEMBER 1980 No. 117



reich-Orchester (Stimmen) Pr. fl. 2.50
Militair-Musik. Pr. 5- netto.
Alther Pr. —



Für Pianoforte zu 2 Händen Pr. fl. 1-
Für Pianoforte zu 4 Händen Pr. —
Für Pianoforte und Violine Pr. —
Für Violine allein Pr. —



COLUMBIA



More Highest Awards at
International Competitions
than to all other competitors
combined.

Columbia Disc Graphophones

Show their superiority whenever examined and tested in competition with any and all other makes. The **Motors** are better built and **run more records** than competing machines. The **aluminum tone arm** gives a mellower tone. **Prove these claims for yourself.**

Graphophone Disc Records yield Greatest Profit to the Dealer.

Under our exchange plan they cost the user 1s. and 2s. each.
Write for particulars.

Columbia Phonograph Company,

CREATORS OF THE TALKING MACHINE INDUSTRY. OWNERS OF THE FUNDAMENTAL PATENTS. GENL.
LARGEST TALKING MACHINE MANUFACTURERS IN THE WORLD.

LONDON: 89, Gt. Eastern Street, E.C. 200, Oxford Street, W.

GLASGOW: 50, Union Street. CARDIFF: 96, St. Mary Street.

SYDNEY, N.S.W.: Paling's Buildings. JOHANNESBURG, S.A.: Sacke's Buildings.

Edchat

No suggestions have so far been made for a new title for this column, so I have invented my own, designed principally to save time with the Letraset.

At the recent A.G.M. a member asked whether we could not have more articles in the magazine giving advice to newcomers to our subject. I am never quite clear what people want when they ask this sort of question - for me, most of the pleasure in starting a collection comes from finding out as you go along. That is why I now enjoy collecting lawn-mowers, about which hardly anything has been written. Collecting is not the sort of skill that you acquire, like cricket or carpentry, and telling people how to collect tends to mean dictating what they should or should not buy, which I think is an easy trap to fall into, but well worth avoiding.

Typically, new collectors write to me with pictures of what can best be described as 'anonymous' horn gramophones, asking for identification. All too often, such machines are not identifiable, because they were assembled from components bought in from outside suppliers (today, they might bear a 'Product of more than one country' label), and sold under a wholesaler's or retailer's brand-name. This was seldom affixed permanently to the machine itself, and since these were mainly cheap models, produced and sold on a minimum overheads basis, they were accorded very little advertising, particularly in the specialist press. The Mail Order columns of national newspapers, and dealer's advertisements in local papers, are probably the best source of information, but imagine going through all those for the period 1918-25, say, just to identify a frankly not very interesting gramophone. Even then, you might only know who sold it, not who actually assembled it. How do you explain all this to a novice, for whom such a machine may be the jewel of his collection, without seeming to imply that he should really get shot of it quick and buy a nice, identifiable HMV instead?

Anyway, if anyone feels he can offer an article that would be helpful to new members, let him not be slow in coming forward. Although at present I have a gratifyingly full 'In' tray for contributions, I am always pleased to receive further articles which would interest readers. May I also ask you all to bear with me and not expect a personal reply unless you are asking a specific question, and then to include a stamped addressed envelope if you live in the U.K. For reasons of cost and layout, line drawings or good photocopies of old engravings are better illustrations than photographs, but I try to include one or two of the latter in each issue; they should be black and white prints, not negatives, transparencies or colour prints.

Finally, may I wish all members a HAPPY CHRISTMAS and a GOOD NEW YEAR!

The Front cover Illustration is an 1892 advertisement from Vienna, sent to us by Dr. Rainer E. Lotz. For Englishmen whose German is shaky, but who associate Vienna with waltzes, it should perhaps be pointed out that 'Walzer' means 'cylinders'.

FROM ORCHESTRELLE TO VOCALION

Part II: RECORDING SESSIONS IN LONDON.

by Frank Andrews.

In February 1917 it was revealed that the Orchestrelle Co. Ltd had opened recording laboratories in London in Chiswell St., E.C. The wax masters were to be sent from here to America for processing into Aeolian Vocalion records.

Percy J. Packman was the supervisor of the staff of three, the other two being C. R. 'Johnny' Johnston, the veteran recorder,¹ and Mr. Quirck, an ex-recording expert for Pathé in London.

The recordings being made at Chiswell St. were similar to the demised Marathon records (for which Packman had been the Managing Director), with Packman's patented V-groove vertical cut. This was intended for playing with a steel needle. As the lateral cut technique was still protected by letters patent in America, Packman's system for Vocalion records joined a number of other vertical-cut discs on sale in the U.S.A., which had appeared as former patents had begun to expire. Because of the activities at Chiswell St., rumours abounded that the Marathon records, which had disappeared early in 1915, were to be resuscitated, but they did not appear. Nor were the vertical-cut Vocalion records sold in Britain.

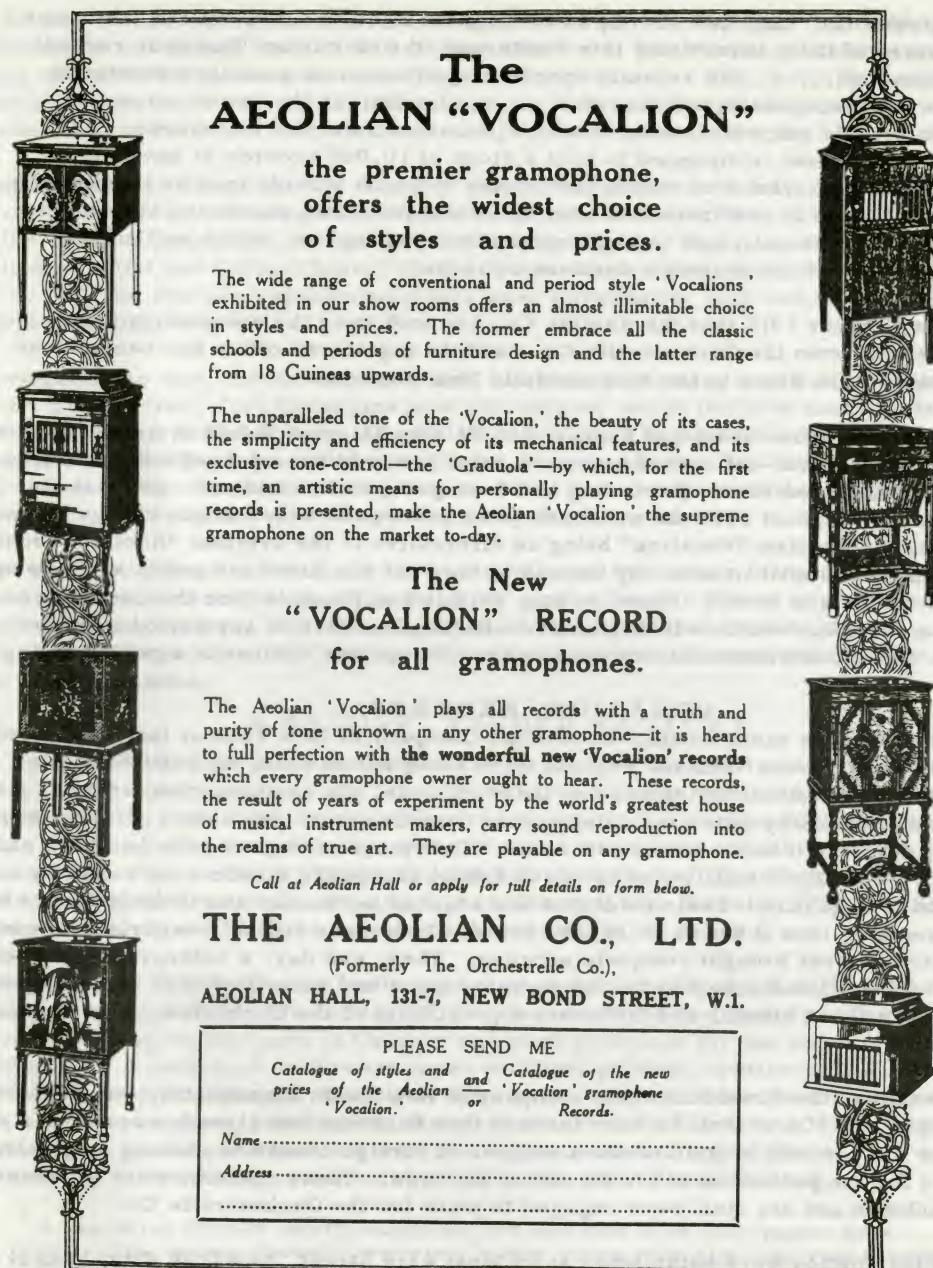
The March 1917 advertisement implicitly referred to the Aeolian Vocalion as a 'gramophone' for the first time; there was "No other gramophone to equal it", and the new June advertisement said that the Aeolian Vocalion was not merely a gramophone but "a perfect musical instrument".

In August 1917, the first Aeolian Vocalion table model was advertised (hitherto all models depicted had been of the floor-standing cabinet type). The table model, EE at 20 gns., also had the Graduola. At the same time came the information that the

¹ He had recorded Florence Nightingale and Alfred, Lord Tennyson at his home in Haslemere. At that time, he had been associated with Gouraud's Edison Phonograph Company in London (1888-90). He had subsequently been attached to the three Edison Bell companies, the National Gramophone Company, the Premier Manufacturing Company, the Clarion Record Company and Beka records.

² A researcher connected with the Player Piano Goup tells me that there is a "Quirck" on his card index of Aeolian Co. Ltd. employees; this could be the same man, for whom I have no further references.

³ Len Watts has a sample Packman-cut record dated October 1916, which implies that Packman had not forsaken his discs. He was to find a commercial ally in the Orchestrelle Co. Ltd. An American collector, Bill Bryant, has two of the British-recorded vertical-cut Aeolian Vocalion records with Billy Whitlock, Olly Oakley and George Ackroyd as artists, but as I have traced all four sides to Marathon records it appears that ex-Marathon matrices may have been used to provide an initial catalogue. I have never seen any of the British artists listed in America's trade paper, The Talking Machine World.



The AEOLIAN "VOCALION"

the premier gramophone,
offers the widest choice
of styles and prices.

The wide range of conventional and period style 'Vocalions' exhibited in our show rooms offers an almost illimitable choice in styles and prices. The former embrace all the classic schools and periods of furniture design and the latter range from 18 Guineas upwards.

The unparalleled tone of the 'Vocalion,' the beauty of its cases, the simplicity and efficiency of its mechanical features, and its exclusive tone-control—the 'Graduola'—by which, for the first time, an artistic means for personally playing gramophone records is presented, make the Aeolian 'Vocalion' the supreme gramophone on the market to-day.

The New "VOCALION" RECORD for all gramophones.

The Aeolian 'Vocalion' plays all records with a truth and purity of tone unknown in any other gramophone—it is heard to full perfection with the wonderful new 'Vocalion' records which every gramophone owner ought to hear. These records, the result of years of experiment by the world's greatest house of musical instrument makers, carry sound reproduction into the realms of true art. They are playable on any gramophone.

Call at Aeolian Hall or apply for full details on form below.

THE AEOLIAN CO., LTD.

(Formerly The Orchestrelle Co.)

AEOLIAN HALL, 131-7, NEW BOND STREET, W.1.

PLEASE SEND ME

Catalogue of styles and prices of the Aeolian and 'Vocalion' gramophone Records.

Name

Address

Orchestrelle Co. Ltd. was shortly to become the Aeolian Company Ltd. Another new feature of their advertising this month was the invitation "Buy your records at Aeolian Hall. We recently opened magnificent new premises devoted to the sale of gramophones and records. Aeolian Hall is the most convenient and comfortable place in London at which to make a selection of records. The Record Department is equipped to hold a stock of 10,000 records at one time; it is furnished with a suite of soundproof rooms in which records may be tried before purchase. You are invited to hear the latest Columbia successes at Aeolian Hall. If unable to call, ask to be placed on our mailing list, which will ensure regular advice of the current selections as issued."

It was in October 1917 that the Aeolian Co. Ltd took over the advertising in the trade papers from the Orchestrelle Co., and its registered office had been moved from Bloomfield Place to the Aeolian Hall, New Bond St.

As yet, no advertisements had appeared in Talking Machine World in America showing that the vertical-cut records were on sale, but in Montreal a report stated that they were expected soon. Recording had been going on in London for at least six months. Throughout 1917 the machines were advertised with a slight change of presentation, the Aeolian "Vocalion" being an alternative to the original "Aeolian-Vocalion", which was still in use. By the end of the year the American public were being offered cabinets in period styles. In May 1918 it was possible "for the connoisseur to obtain a 'Vocalion' which will harmonize with the furniture of any period or style", and the New Bond Street advertisement showed a console cabinet in a period style.

VOCALION RECORDS

In America in the same month, the Aeolian Company of New York at last announced that the vertical-cut Vocalion records were being put on sale, with the first list ready for distribution. In introducing these records, the company claimed that, just as it had spent many years in perfecting the Vocalion machines before offering them to the public, so it had with the new discs. Two years of experiments had been undertaken by Prof. Dayton Miller of the Case School of Applied Science, an authority on tone and tone quality. Their machines had reached perfection and if there was to be any improvement, then it had to be in the record. Professor Miller's experiments over two years had not brought complete success. Then, one day, a cablegram had been received from London saying that an inventor there had submitted disc recordings vastly superior to those known, and there was a possibility of the Orchestrelle Co. acquiring the process.

H. Tremaine, the President of the company in New York, immediately left for London to investigate. On arrival he soon learned that Packman had already secured his patents for his process in Britain and a number of foreign countries, having originally done so for the protection of his Marathon Records. These patents were purchased and Packman and his staff were engaged to work for the Orchestrelle Co.

Recording studios were established at 35 West 43rd Street, New York City. Luxurious artists' and practice rooms were installed in the Aeolian Building and a number

of artists well known in America were engaged to make recordings. I do not know if Packman and Quirck went to New York at this time, but Johnny Johnston was certainly one of those who worked in the New York laboratory. The resulting Aeolian Vocalion discs were both single and double-faced and sold at prices ranging from 75cents and upwards for 10-inch discs and \$1.25 and upwards for the 12-inch size.

A massive sales campaign was launched throughout America in July 1918 for the Vocalion records, featuring such artists as Crimi, Florence Easton, May Peterson of the Opéra Comique, Rosa Raisa of the Chicago Opera, Maurice Dambois, the Belgian 'cellist and Colin O'More, the Irish-American tenor. In Britain, throughout 1918, only the Aeolian Vocalion machines were advertised, referred to quite often simply as Vocalions. ⁴

Throughout the war, the Aeolian Co. Ltd. had been presenting a series of concerts at the Aeolian Hall, free to Service men and women, which included many artists who gave their services freely. Frank Armstrong had organised these concerts, usually held on a Sunday, and he also played the organ in the Hall when it was deemed necessary. With the Armistice of November 1918, a charge of one shilling began to be made and the artists appearing were paid a fee from then on.

A new advertisement in February 1919 was followed by another in April, which described the Aeolian Vocalion as "The Dancers' gramophone". There was still no suggestion that any dealers, factors or agents had been appointed for the machines. Catalogue 9 had been joined by Catalogue 8, which explained all about the machine and the various models.

A BRITISH RECORD FACTORY

On April 31st 1919 the Universal Music Co. Ltd. began the construction of a factory for making gramophone records, in addition to its existing music-roll factory at Hayes. In July, the 100th. in the series of concerts at the Aeolian Hall was held. The artists included the following, some of whom were later to make Aeolian Vocalion records: Fraser Gange (Baritone), his wife Amy Evans, Olga Haley (Mezzo-sop.), Percy Kahn (Pianist and Composer), Lilian Hoare, Adela Hamaton (Pianist), Phyllis Allan (Violinist) and Madame Seraphime Astafieva (Ballet dancer).

In September 1920 the London trade papers received sample copies of the new Aeolian Vocalion discs, which were coming off the presses at the new factory. The records were announced by the trade in October and were promised for the market "almost immediately". A catalogue on fine art paper had been printed, containing 170 different recordings and photographs of many of the artists. The initial repertoire was mainly of a high class nature, befitting the tastes of the Bond St. clientele. The company thus entered into head-on competition with the well-established repertoire of HMV and the burgeoning and improving repertoire of Columbia under Louis Sterling.

⁴ A total of ten different advertisements had now been used in the trade papers since October 1915, with the Graduola device as a leading selling point; also "Buy Your Records at Aeolian Hall". During the year, Charles Knevyl Sugden, the new director of the Aeolian Co. Ltd, had also been appointed a director of the Orchestrelle Co. Ltd.

The Aeolian Vocalion records were put on sale in December 1920, and were of the usual black composition (unlike the contemporary American discs). Ten categories were offered, six of which are shown in the May 1922 advertisement on the opposite page; the brown label (also available in 12-inch size) was introduced in January 1922. The other four variations in 1920 were 10-inch versions of the Pink, Red and Green labels at 6/-, 5/6d. and 5/- respectively and 12-inch Black label at 6/6d.

Celebrity artists in the first list were Kathleen Destournel, Caroline Hatchard and Zoia Roskowsky, Lenghi-Cellini and Rosing, George Baker and Marcus Thomson, John Buckley and Kenneth Ellis, Albert Sammons, C. Warwick Evans and Felix Salmon, Lionel Tertis, Frank St. Leger and the London String Quartet. Other artists included Maidie Scott, The Aeolian Orchestra, Arthur Joyce's Dance Orchestra and the Band of H. M. 1st. Life Guards, conducted by Lt. George Miller.⁵

In America in January 1920, after nineteen months of making and selling Aeolian Vocalion vertical-cut discs, the New York company announced its new lateral-cut records. This clearly indicates that the patents protecting the process had expired or were about to. Three lateral-cut discs were put out in the Mid-January releases. In February the American factory began to be enlarged, and in March the vertical-cut records were discontinued completely in the monthly supplements. In August the lateral-cut discs started to appear in a red-coloured composition and were advertised from then on as Vocalion red records.

During 1920 another record making plant had been brought into production in America and additional plant installed to expand facilities still further. Wallace Brown, formerly District Manager in the Detroit area for Brunswick Records, had been appointed Wholesale Manager for the Aeolian Vocalion records. For 1921, the Aeolian Co. announced that it was abandoning the sale of Columbia machines and records and in February they issued the first recordings of the Aeolian Orchestra conducted by Arthur Bodazky. They still claimed to be the largest manufacturers of musical instruments in the world. In March, they revealed the appointment of Robert Hood Bowers as Musical Director for the Aeolian Vocalion records. He had recently been conducting orchestral recordings for Columbia.

A telegram was received from A. J. Mason (the Managing Director in London) which read, "Have great pleasure in advising you that the Aeolian Vocalion is now being used in both the Royal Academy and the Royal College of Music for Educational Purposes." It is almost certain that the records labelled 'A. F. M. C. - Series of Educational Records' were recorded and pressed by the Aeolian Co. Ltd. for use on the machines in the Academy and R. C. M.. It has been suggested that the initials signify "Arranged for Music Colleges".

In April 1921 an innovation was the inclusion of explanatory commentaries on the reverse of single-sided records of operatic arias, giving details of the aria's place in the

⁵ Four different advertisements continued to advertise the Vocalion machines throughout 1920 in Britain. From January 1921, new Aeolian Vocalion records were issued almost every month.

NEW "VOCALION" RECORDS

SELECTIONS FROM MAY LIST.

PINK LABEL, 12-in., 8/-

A-8187 *Calesto Aida (Heavenly Aida)* "Aida." (Verdi). Vladimir Rosev (Tenor). Orch. acc.

RED LABEL, 12-in., 7/6.

C-8186 *Honour and Arms "Samson"* (Handel). Malcolm McEachern (Bass). Orch. acc.

GREEN LABEL 12-in., 7/-

J-84436 *Symphony No. 6 ("Pathétique")* 2nd Movt. Allegro con grazia (Tchaikovsky). March from "Parisifal" (Wagner). Band of H. M. 1st Life Guards.

BLUE LABEL, 12-in., 7/6.

D-82859 *Nut Brown Ale (H. M. Teneent'). The Floral Dance (Katie Moss)*. Malcolm McEachern (Bass). Piano acc.

D-82860 *Trio in B flat, Op. 99. 3rd Movt. Scherzo. Allegro (Schubert arr. Terzia. Trio in B flat, Op. 99. 4th Movt. Rondo (Allegro vivace). Albert Sammons (Violin). Lionel Tertis (Viola). Ethel Hobby (Piano).*

BLUE LABEL 10-in., 5/6

R-84880 *Horn in the quiet hills (Gerald Carnie). What's ver is—best (Hermann Löhr). Margot Ballou (Contralto). Piano acc.*

MOOR DUPLEX - COUPLER PIANO ON "VOCALION" RECORDS

BLUE LABEL, 12-in., 7/6.

D-82855 *Organ Fugue in G (Bach). Played on the Moor Duplex-Coupler Piano. Prelude, Op. 71, No. 3 (Emmanuel Moor). Played on the Moor Duplex-Coupler Piano (Harpsichord Attachment). Max Pirani.*

D-82856 *Organ Prelude in G (Bach). Played on the Moor Duplex-Coupler Piano. Sonata in C (Scarletti). Played on the Moor Duplex-Coupler Piano (Harpsichord Attachment). Max Pirani.*

BLACK LABEL 10-in., 4/6.

X-9116 *I pitch my lonely caravan at night (Eric Coates). Piano acc. Doloresa (Montague F. Phillips). Stewart Gardner (Baritone). Piano and Calesto acc.*

X-9118 *Ab! though the silver moon were gone (Hermann Löhr). Bubble and Squeak "The Cockyold Bird" (Maria Shaw). Frank Titterton (Tenor). Piano acc.*

X-9117 *Sweet Hawaiian Girl of Mine (Sam A. Perry). Ukulele Duet. Susquehanna Shore (Young-Parish-Squires). Ferrara and Fraschini.*

BROWN LABEL 10-in., 3/6.

M-1025 *Georgia Rose (Fox Trot). The California Ramblers. Stars (Fox Trot). The Riviera Dance Orchestra.*

M-1033 *Tenderly (Fox Trot). Halkin's Dance Band. April Showers (Fox Trot). The Riviere Dance Orchestra.*

M-1034 *Just a little love song (Fox Trot). No one's ever kissed me ("Pot Luck") (Fox Trot). The Vocalion Dance Orchestra.*

M-1035 *Arabian Blues (Fox Trot). The St. George's Dance Orchestra. The Sheik (Fox Trot). Birds of a Feather (Fox Trot). Adalanta (One Step). The Vocalion Dance Orchestra.*

M-1036 *Capriccio in B Minor, Op. 76, No. 2 (Schubert). Played on the Moor Duplex-Coupler Piano. Gavotte "Iphigénie en Aulide" (Gluck-Brahms). Played on the Moor Duplex-Coupler Piano (Harpsichord Attachment). Winifred Christie.*

Pavilions (Moritz Rosenthal). Played on the Moor Duplex-Coupler Piano. (a) Minuet (Furcell).

(b) Gigot (Arne). Played on the Moor Duplex-Coupler Piano (Harpsichord Attachment). Winifred Christie.

Capriccio in B Minor, Op. 76, No. 2 (Schubert). Played on the Moor Duplex-Coupler Piano. Gavotte "Iphigénie en Aulide" (Gluck-Brahms). Played on the Moor Duplex-Coupler Piano (Harpsichord Attachment). Winifred Christie.

THE AEOLIAN CO., LTD.
AEOLIAN
HALL,
NEW BOND ST.,
W. 1.



opera and a resumé of the plot. Although the label stated that patents had been applied for on this feature, it is probable that these were not granted, as the device had been used earlier on Edison Diamond Discs. At about this time the word Aeolian became a registered trade mark with respect to talking machine products.

Two remarkable sets of records were issued in June 1921, both recorded by the former leading tenor of the St. Petersburg Opera, Vladimir Rosing, who counted among his teachers Figner, Kartsova and Tartakoff. He had been invited to become the leading tenor at the Vienna Opera, but the war prevented this, and after singing for a short time at the London Opera House, he had joined the Russian Army. The first set of twenty-four records, *The Growth of Russian Song*, in two albums, consisted of a mixture of 10-inch and 12-inch records on the Pink label, and cost 10gns. The set included a handbook by Ernest Newman containing annotations and full English translations. All the recordings were accompanied on the piano by Frank St. Leger, except for one with Ivor Newton. The second set was *The Realistic Songs of Moussorgsky*, made up similarly of twelve mixed-size Pink label records with the same two accompanists.

In July 1921, the Orchestrelle Co. Ltd. changed its name to The Aeolian Co. Ltd., while the existing Aeolian Co. Ltd. changed its name to the Hayes Piano Manufacturing Co. Ltd., and all the registered trade-marks were transferred to the latter's ownership.⁶ The May advertisement had, for the first time, mentioned accredited agents for Aeolian Vocalion machines, and the July advertisement now invited dealers to apply directly to Aeolian Hall for particulars of Aeolian Vocalion records, as they were not supplied through factors.

In November 1921 a new table grand, Model C, was the first Aeolian Vocalion to be offered without the Graduola device. It was priced at 12gns., and had an unusual arrangement whereby the doors in front of the horn opened inwards to form the sides of the horn mouth.⁷

"THE GRAMOPHONE"

The Aeolian Co. was in some measure responsible for the birth of The Gramophone, which made its first appearance on April 20th 1923. By chance Compton Mackenzie was walking down Bond Street in November 1921 (as he later recalled in his Introduction to the 1973 Gramophone Jubilee Book) when the sight of the Aeolian Hall reminded him of having played a friend's Aeolian organ years earlier, and he decided on the spot to buy one for his new house on the Channel Island of Herm. There was only one instrument in the showroom, and this he arranged to buy by hire purchase;

⁶ In June 1921, the Aeolian Co. Ltd. had ideas of raising £500,000 by the issue of notes carrying 7½% interest, but the stringencies of the money market at the time finally decided them against the move.

⁷ In September 1921, an arrangement was entered into with the Aeolian Co. (Proprietary) Ltd. of Australia, which was enjoying surplus assets of £116,000. The ordinary stockholders in the Australian undertaking agreed to transfer the business to the newly-named Aeolian Co. Ltd. of London, taking an amount of shares in the London company equal to their holding in the Australian concern.

as no catalogues of rolls were in stock, one was to be sent as soon as available. Unfortunately, when the catalogue arrived at Herm, Mackenzie found it no longer contained the arrangements of classical works which he remembered playing, and protested to the company that he had bought the organ under a misapprehension. The company replied that the deal could not be rescinded because of the Hire Purchase agreement, and eventually Mackenzie agreed to take a gramophone instead - a Hepplewhite model.

Mackenzie then began his voyage of discovery through the Vocalion, Columbia and HMV catalogues, wrote a successful article about recorded music and subsequently came to the conclusion that there was a need for a periodical devoted to the subject of recorded music in its higher forms. Thus appeared The Gramophone, Vol. 1 No.1, on April 20th 1923, a magazine which flourishes to the present day, through the inability of the Aeolian Co. to supply Compton Mackenzie with classical music rolls.

A new mid-week series of concerts was begun at the Aeolian Hall in October 1921, beginning at 11.30am. On Mondays, Pianolas were demonstrated with performances from singers, Tuesdays were devoted to Aeolian Vocalion gramophones, Wednesdays to Weber-Pianolas and Thursdays to Pianolas and singers once more. Only 'Singers of Distinction' were engaged for these concerts. In December a new company, the Meloto Co. Ltd was registered. Charles Knevyl Sugden, the Aeolian Co's Director, was associated with this. Meloto gramophones, records and music rolls are known to have been available on the British Market, but the exact connections between Meloto and Aeolian has yet to be determined. Meloto records were pressed by the Universal Music Co. Ltd at Hayes, from masters within the factory, and were but one of many makes of record pressed at Hayes under contract.⁸

In January 1922 Aeolian introduced a new category of record, the cheapest to be offered under the Aeolian Vocalion name. This was the M series of 10-inch records with brown and gold labels, at 3/6d. The subject matter was mainly dance music and popular songs.⁹ A series of testimonials in praise of the new 'M' records appeared in advertisements, emanating from artists prominent on the London stage. These included Leslie Henson, Phyllis Monkman and José Collins. These advertisements proclaimed for the first time that the Vocalion records and machines could be obtained from "All principal London and Provincial dealers".

Along with other makers of popular records in the U.S.A., the New York Aeolian Co. reduced the price of some of the Vocalion red records to 75 cents in February 1922.

⁸ In November and December, the Hayes Piano Manufacturing Co. Ltd resolved to wind up its business and go into voluntary liquidation, and to vest the whole of its assets and its subsidiary companies into the Aeolian Co. Ltd (the former Orchestrelle Co. Ltd.). This took place on December 21st 1921, and the final winding up meeting took place on June 26th 1922.

⁹ One man who was never to hear this new series was Sir Ernest Shackleton, the Polar explorer. In the previous September he had sailed for the Antarctic on his ship The Quest carrying with it an Aeolian Vocalion and a quantity of records. During the voyage he caught influenza and died of heart failure on the ship at South Georgia Island in the South Atlantic, on January 4th 1921.

REPRONEO.



1021

You don't know what a Reproneo is? Well, that's not your fault—because it is something quite new. Novelties are always an attraction, and here is a Novelty. Thousands upon thousands of people have Tone-Arm Disc Machines. They all want to play **NEOPHONE RECORDS**, but they can't, because their Machines have a Needle Sound Box, and Neophone Records can't be played with a Needle. Here comes in the Reproneo. Take off your Needle Sound Box and in its place fix a Reproneo, and eh! presto! you can now use your Machine for playing Neophone Records. A Reproneo costs 15s. retail, and is cheap at the price, like Neophone Records which retail at 6d. and 1s. each.

All up-to-date dealers will stock the Reproneo. Are you going to be up-to-date?

Send for Catalogues and Record Lists.

NEOPHONE LIMITED,
1, WORSHIP STREET, E.C.

The Neophone

Patented
in .

DISC=PHONOGRAPH

SYSTEM
DR MICHAELIS.

U.K. USA. FRANCE.
GERMANY. AUSTRIA.
RUSSIA. ITALY. CANADA.
INDIA. AUSTRALIA. ETC. ETC.

NEOPHONE LIMITED.
1, Worship St. Finsbury Square. LONDON. E.C.
Telegraphic Address.
DISCOPHONE, LONDON

Telephone,
258. LONDON WALL

Sir,

I have a coin-operated Zonophone on which I would like some information, e.g. when and where it was made. I enclose a few photographs which may be of assistance and the following is a brief description:

The case is of oak, in good condition apart from some worm. 7-inch turntable on a straight shaft, kept in position by a pin. Brass horn $16\frac{1}{2}$ in. long and $9\frac{3}{4}$ in. wide, with a leather elbow. The motor and coin mechanism appear to be complete and in good condition, but the travelling arm, horn support and soundbox are missing. (I have a soundbox which has 'Reform Schalldose' on a leather strip around the rim, but I do not think it belongs to the Zonophone.)

The turntable, support arm and 'coin-box' were nickel-plated and the knob on top of the push-rod is brass. There are no signs that the case was attached to anything else, apart from a slot on the underneath of one edge, so where did the coin go after going through the coin mechanism?

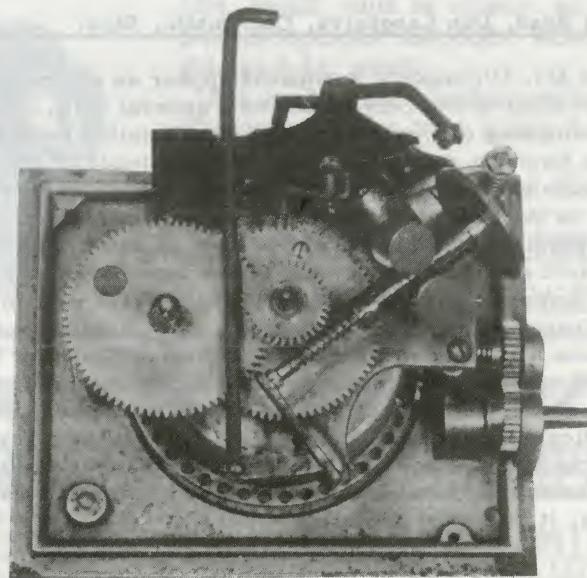
Under the turntable on top of the motor housing is 'Zonophone' in English and in what I am told is Old Russian. Indented on the underside of the turntable on opposite sides are the numbers 2 and 24, under the support arm 2 and M2 and on both parts of the coin-box 457. I would like to get in touch with someone who has a similar machine and also someone who can advise me on restoration.

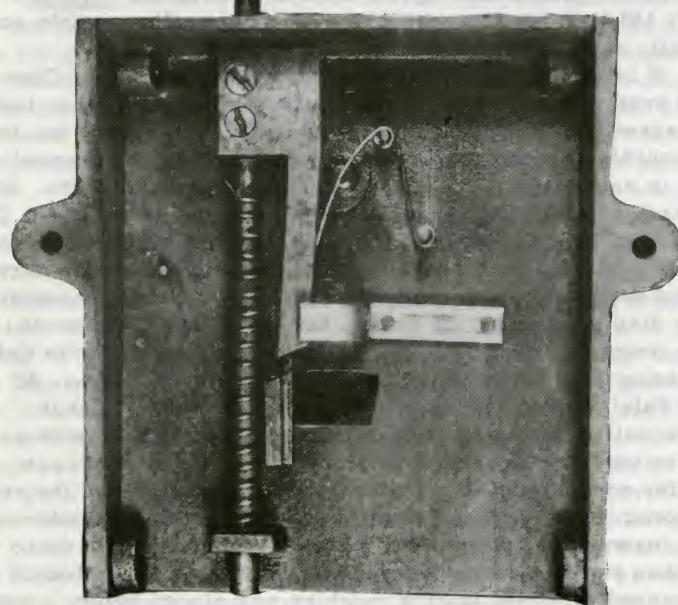
Yours faithfully,

Edward O'Connor

Dublin, Eire.

Photographs of Mr. O'Connor's Zonophone appear on our centre pages, showing the motor, opposite sides of the coin-chute and a general view. These pre-G and T Zonophones are something of a grey area as far as detailed knowledge is concerned; they were made in America and in Germany, and one tends to assume that most of those found in Europe came from the latter source. Certainly, most seem to have the Cyrillic name on the bedplate. Many turn up equipped with G and T Concert soundboxes, indicating possibly that they may have been so fitted originally - at least in the case of those sold after the take-over. I have never seen an original Zonophone soundbox with the name on it, although I have seen several with un-named soundboxes; which, if any, of these was correct I cannot say. The Reform soundbox is certainly not correct; this was a Lindström product, often found with other names in the leather strip (including Dulcephone and Ercophone), and dating roughly from 1908-12. I have not seen this coin-slot model before, although there is another, more elaborate version shown in the Nicole Frères catalogue of 1901-2. We would very much like to hear from anyone who can tell us more about Mr. O'Connor's model, or could advise on restoration. The travelling arm would be particularly difficult if, as on most Zonophones of this type, it is a steel pressing. - Ed.





People, Paper & Things

By George Frow.

More than once in this column we have noticed the interest there is in Japan in the life of Thomas Edison, and this is evident once again in a report from Toru Funahashi of the celebration of the 100th anniversary of the bamboo filament this autumn at the Iwashimizu-Hachiman-Gu shrine in Kyoto. It will be remembered by students of Edisoniana (via W. K. L. Dickson's biography) that of the more than 6,000 varieties of bamboo fibre tested, the best for the purpose of the lamp filament came from the groves of the Iwashimizu-Hachiman-Gu shrine; this was used for fourteen years until the advent of the squirted cellulose filament. Dr. Funahashi arranged for a copy of Robert R. Toth's bas-relief plaque of Thomas Edison to be presented to the shrine. It is at first sight a strange fact that the Japanese people have established a monument to T. A. E. at this shrine; he is not remembered similarly in any other place outside the United States - certainly nowhere that comes easily to mind - but of course several of his more spectacular inventions were being approached or duplicated in other countries at the same time. The most spectacular point of his lamp invention was surely that he invented the whole electrical system that went with it? However in the matter of the electric lamp Swan and Crompton were hard at work in England a hundred and more years ago, and to every Frenchman, Cros is still first with the Talking Machine.

To progress to records of the flat kind, we have on several occasions in this column speculated on what was the longest or the shortest-playing record, or the biggest or the smallest and so on. The following has been noticed in the Talking Machine News for December 1913, being an account of a Marathon hill-and-dale record, and is reproduced in full, as follows:

"Where will it end? It is perfectly true that the National Gramophone Company advised us that even with a 12in. disc of $7\frac{1}{4}$ minutes in length, they had not by any means reached the limit of possibility under their system, but no one could have reasonably expected that the company would have advanced from $7\frac{1}{4}$ mins. to $8\frac{1}{2}$ in one stride. Yet such is the fact. 12 in. disc No. 2042 bears four songs, each of which is reproduced note-for-note as written. The artist responsible is Mr. Tom Kinniburgh, and certainly his wonderful voice has never been reproduced with such faithfulness of tone and timbre as hereon. To return again to the details of the record, the total time actually occupied by the music on this disc is 16 mins. 26 secs., the actual playing time of each item at 80 rpm being (a) "True Till Death" 3 mins. 55secs; (b) "In Cellar Cool" 4mins. 30 secs; (a) Rocked in the Cradle of the Deep" 3 mins. 45 secs; (b) "Sheltered Vale" 4 mins. 15 secs. As a record achievement it stands absolutely unequalled, being more than twice as long on each side as the longest 12 in. disc made under the Berliner system. The record is in every way a matter for congratulation. To the recording expert, for the remarkably faithful reproduction, and to the artiste for the excellent rendering, and to the company, inasmuch as it provides a striking vindication of their claim that the Marathon patent system of recording is the greatest advance which has been registered since the talking machine was placed before a wondering world."

This is quite remarkable for its time; when later the Edison Company was experimenting with long-playing records and the staff was capable of cutting 600 t. p. i. at 30 r. p.m. the main problems seem to have been the disposal of swarf and dust from the immediate cutting area and the pressing of these fine grooves in Condensite lacquer without craters, pulls and general blemishes.

It is always saddening to read of some star of our younger days fading from view, someone whom one has never seen save perhaps on a film or photograph, and only known by their records. Two women singers, much admired in their time, died recently. One was Militza Korjus who died in August aged 72, a dazzling singer who has left behind her some gorgeous records, and a memorable appearance in the rather over-lush "Great Waltz" film in 1938. Among Korjus' dozen or so outstanding records "Invitation to the Waltz" (C2721) and Proch's "Variations" (C2664) must be mentioned in particular, and most of her HMV recordings are not too difficult to find. Another soprano who also never made the red label was Lina Pagliughi, who died in October; she had a long recording career, starting in the HMV Rigoletto (C1483-97), released in the Spring of 1928, and that company's first 'complete' electrically-recorded opera. A quick calculation will tell that Madame Pagliughi would have been 21 at that time, which makes her quoted age of 73 this year open to question. Her light soprano carried her through a series of Parlophone opera arias issued in the late thirties, and into Cetra 1. p. s of opera from broadcasts, available in the 1950s and since repressed. A look at the Italian catalogue of the thirties shows little Pagliughi recording activity.

Reginald Gardiner who died earlier this year had a recording reputation depending entirely on one record, Decca F5728 in 1934 (and No. 2 in our collection), and this was simply called "Trains" parts 1 and 2. It was a simple account of steam trains and the noises they caused as they went along, and this record has a really extraordinary popularity that was deserved for its originality and plummy approach. It was available once in 45 rpm form, and may still be. This office stopped buying the Gramophone Popular Catalogue when it reached three shillings and sixpence in April 1959. Heaven knows how many pounds that is in today's money! Returning to Gardiner, he had been on the British stage in revues and plays for years, went eventually to Hollywood in 1936, and may still be seen at times on television in older films.

In the queue for the recent London E. M. I. auction there were several friends from Holland including Harry Belle, one of the cornerstones of the phonograph movement in the Netherlands. Harry very kindly gave the Society some photographs taken at the Malvern Phonofair in the Spring and these will go into the Society Archive. He also sent a sound cassette of a Dutch television show wherein Leonard de Vries - interviewed by Willem Duys - successfully demonstrated the Goodwin Ive tinfoil phonograph with "Mary had a Little Lamb" and other utterances that the audience acclaimed with good-natured enthusiasm. Really, the results played back on the instant were quite realistic, considering the machine's simplicity, showing that these replicas will 'do their stuff' if worked upon. He also played other Edison records and talked about the Tone Tests. The Dutch Society has its magazine which has been running for 18 months, and further enquiries should be directed to: Herman Belle, [redacted]

There is a lot of joy to be derived from the reading of old record catalogues, and looking again through Brunswick monthly leaflets recently for the late 1920s, it seemed that some of the items noticed might interest collectors. Both Pietro Mascagni and Otto Klemperer were conducting the Berlin State Opera Orchestra in 1927 (a very much recorded orchestra in those days) and this counters the usual view that Klemperer's early Decca records were his first available here. Leslie Hutchinson ('Hutch') seemed to be the studio accompanist and Ambrose's first recordings appeared with the Mayfair Orchestra. He was always said to have led the Club de Vingt Orchestra on Edison Discs (and Blue Amberols) in 1921-2, but by then he was at the Embassy Club in London. Jessie Matthews made her first recordings on Brunswick in December 1927, as did lady cinema organist Florence de Jong, who is happily still entertaining us. Her American opposites Lew White and Eddie Dunstedter played the latest hits, and Piccaver, Rethberg and Onegin contributed operatic extracts. At the end of December 1927 Fred Elizalde took up the baton of a Band at the Savoy Hotel "After scouring the world to secure the finest talent procurable". This is remarkable in that Elizalde was not more than 20 years of age - according to the catalogue - and had been recording solo piano and with his band on Brunswick over the year. Truly a prodigy. Another prodigy though somewhat older was Leopold Godowsky, "the pianists' pianist", whose arrangements for and flexibility on the piano astounded even the experts, but he practised all day but found time to record for Brunswick at this time. Most of these post-Panatrophe Brunswicks are rare if one is looking for them in particular, but they sometimes turn up quite unexpectedly if one is not, and the writer can report several desirable finds over the years, but one should not think of them without a fair life expectancy ahead! In general they contain American material, vaudeville artists being led by Harry Richman and Al Jolson, and there are a number of famous American dance bands of the period. Later, by the end of 1930 the whole numbering system became re-organised and the period of Crosby, Mills Brothers, Boswell Sisters and the like began. These Brunswicks of the twenties are deserving of a listing by someone, and a treatise on the talent.



Puriton, Somerset.
Sept. 2 1980.

Dear Sir,

I have been looking at HILLANDALE, issue 114, Page 37, the 'inside out' phonograph, and am wondering if it is indeed a reproducing machine. Could it not have been a recording machine attempting to cut out one step in producing moulded cylinders? A plasticised celluloid cylinder might have been expanded into the master so produced. The date, 1904, is I think reasonably near the period when experiments were being made in this field.

Yours faithfully, S.G. Overstall.
Possibly - but if so, why did the Patent Specification not say so? In fact, it specifically refers to a 'reproducer' (item 12 in the diagram). - Ed.

Springs Eternal

L Lanelli
Dyfed.

Dear Mr. Proudfoot,

Now that E. J. Goodall's articles on the Clockwork Acoustic have reached their conclusion, I feel sure that many readers of Hillandale like myself will miss them. I personally have found them interesting, instructive and pleasurable reading.

His description of changing his first spring brings back to my mind a rather nasty experience I had in my young days. My first broken spring was dealt with by the local watchmaker, who charged me 4/6d (22½p) for a replacement and 2/6d (12½p) for his labour. Now, for half-a-crown in those days you could have bought one good quality record or two cheap ones. I therefore decided, on my next breakage (the cheap Continental motor was susceptible to broken springs) to do the renewal myself.

After purchasing a spring from the same jeweller, I dismantled the motor and removed the drum. I anticipated no difficulty, being adept at overhauling alarm and similar clocks. I did not possess Mr. Goodall's foresight in covering the assembly with a box, moreover the operation was carried out in the best room of the house - known in those days as the 'parlour'.

After prising off the cap while holding the drum in my left hand, I cheerfully wrenched out the centre coils of the spring with a pair of pliers. Imagine the shock I received when the drum spun violently in my hand, the teeth of the big gear (which was riveted to its base) inflicting a severe cut in my palm, then, flying across the room it struck the wall a shattering blow, narrowly missing a glass china cabinet.

If the wound I sustained was painful, so was the ticking off I got from my mother for damaging the wallpaper. Such operations in the future, I was told, were to be carried out in the open air. The lesson I learnt was never forgotten; subsequent renewals were, and still are, accomplished with the drum firmly held in the jaws of a vice, between shaped wooden blocks. One then has TWO hands to deal with the spring, making its removal and replacement comparatively easy.

M. John.

AND, FROM KEN CHAMPION...

Old age and arthritis have taken their toll of my wrists, which are likely to give way without warning. Recently I made three attempts to replace the spring in the spring-box of a 'Q' and each time the spring and box flew across the workshop. A reliable third hand was necessary but the vice could not be used as the spring-box

(Continued p. 138

Ten Thousand Half-Guineas Given Away.

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DISC-PHONOGRAPH.

(SYSTEM DR. MICHAELIS.)

Combines all the advantages of Two Systems Cylinder and Disc.

There are no needles to change, the Concert Reproducer supplied being fitted with a genuine Sapphire.

THE RECORDS ARE UNBREAKABLE.

Dr. Michaelis, the well-known expert, has devoted many years to producing an Instrument and Records which, while embracing **all** the advantages of other makes, should yet be sold at a price bringing them within the reach of all. The result is the NEOPHONE and its wonderful Records. To popularise this marvellous invention, we make the following

ASTOUNDING OFFER

to every one filling in Coupon attached and forwarding P.O. value One Guinea. We will send, packed free and carriage paid, throughout the British Isles:—

One Neophone Attachment,	can be instantly used on any Disc-Talking Machine	£	s.	d.
6 Assorted 12-in. Unbreakable Discs	- - - - -	0	6	0
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One Special Free Gift of One 20-inch Neophone Grand Opera Disc, which will play from 8 to 10 minutes, giving complete overture, such as "Poet and Peasant," "Light Cavalry," "La Reine de Saba," "Bohemian Girl," etc. Value 10s. 6d.

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Our offer holds good for Coupons sent to any of our authorised agents throughout the world. No person can accept the offer more than once.

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WE have been recently, and are still, inserting a special series of advertisements in all the leading daily and other papers with a view to reaching every section of the public, pointing out the merits and advantages of Neophone goods. This is done entirely in the interests of our dealers and ourselves, and with a view to expediting business to our mutual advantage.

We append hereto copies of the special offers and announcements so that dealers may be fully acquainted with same, and we take pleasure in intimating that to place dealers also in the position of acceding these exceptional offers to their customers and others, we will, upon their cutting out this page and posting to us with request for the number of "special offers" (and which ones) they require, immediately execute their orders: but as this is an altogether exceptional opportunity, cash must be remitted to cover, when the customary allowance to dealers will be granted.

Agents will observe that in these schemes we are giving them very valuable aid in the pushing of business and in assisting the public to acquire the superior yet vastly cheaper Neophone products, and we are sure they will be anxious to co-operate with us.

Dealers are desired to see that no purchaser is supplied with more than one of these special offers.

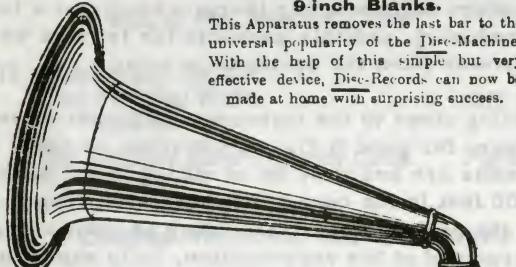
9-inch Discs, 6d. each. 12-inch Discs, 1s. each.

THE NEOPHONE Home Recording Attachment. FOR ANY DISC-MACHINE.

The ONLY Instrument that enables you to make Disc-Records IN YOUR OWN HOME. Can be fixed in a few seconds.

Price 30s. complete, with Six 9-inch Blanks.

This Apparatus removes the last bar to the universal popularity of the Disc-Machine. With the help of this simple but very effective device, Disc-Records can now be made at home with surprising success.

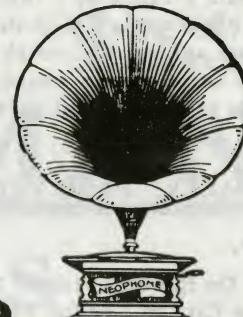


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To every purchaser of a Home Recorder we will present

SIX 12in. RECORDS.

Please mention style of Disc Machine you have, and send this Coupon, enclosing 30s. to our address.



Get a Repro-Neo for your Disc Talking-Machine.

It is the last word in sound re-producers. Instead of the ever-changing needle it is fitted with a permanent sapphire point. It can be fitted to any disc talking-machine, and will enable you to use the wonderful "Neophone" disc record on any disc-talking machine.

**ITS PRICE IS
15/-**

It saves its cost over and over again by the immense saving effected in records, for "Neophone" records cost only

**6d. for 9in. and
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You should get a Repro-Neo to-day and we make you this special offer.

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For every purchaser of a "Repro-Neo,"

price 15s., we will present
Six 12-inch "NEOPHONE" Records Free.

Must be exchanged within 4 days
from mention of this offer. Disc machine
you now have, cut out this coupon and
post, enclosing 15s. to—

**NEOPHONE Limited,
WORSHIP STREET,
LONDON, E.C.**

Street, Finsbury Square, London, E.C.

is made of aluminium. I made a small work platform with a piece of wood 10 inches square with a 1 inch by 1 inch piece of wood fixed to one edge which could be held in a vice. A hole was cut in the platform to accommodate the gear on the spring spindle so that the spring-box could lie flat. The box was secured to the platform with six half-inch nails spaced round the circumference and in between the gear teeth. Then it was not at all difficult to wind the spring into the box.

AND FINALLY, FROM THE SOUND WAVE FOR MAY 1922:

Dear Sir,

On the occasion of Mr. Seymour's B.C. demonstration at the March meeting of the City of London Phonograph Society, I notice it is stated that the springs did not govern satisfactorily the mandrel and the friction device together. I may say that my B.C. ran off from 1905 to 1914 five Standard or two Amberol wax records per wind all at full volume, with the machine exactly as issued by the Columbia Company. It also ran off two Blues per wind, everything governing perfectly. I have two B.C.'s, and the other performed similarly. They were out of use during the whole of the war period, and on recommencing operations I found the running power had fallen off considerably. As this did not improve, I removed the springs from the drums recently and cleaned them thoroughly with paraffin, after which I greased them with Mr. Seymour's own preparation, "Lubrica," and after replacing (a two-man job this) the springs, one has resumed the normal running and the other nearly so. I may say I had to scrape off most of the old graphite with a blade, as it stuck like cement. In most cases where the B.C. does not govern satisfactorily there is too great a tension on the roller shaft spring (behind reproducer), and this prevents the friction wheel from operating freely, and also takes power from the springs.

Re remarks on volume by those sitting close to the instrument, it must be remembered that a 56-inch horn is necessary for good B.C. reproduction, and this throws the sound forward, so that the best results are heard by those sitting at the back of a large room or at a distance of about 300 feet in the open. The large diaphragm delivers it in a more mellow manner than the ordinary size, and many persons coming into the house here have been agreeably surprised at the reproduction, fully expecting to be deafened after hearing it at some distance away. If, while a record is being played, a needle point is held lightly to each side of the amber roller for a few seconds, the volume would, in a short time, become tremendous, but would also set up something like a second surface noise, and the tone would be very coarse. I may say that in most camps I have been in every word on most songs has been distinctly heard a mile distant. This, of course, refers to open country. I will now close, and must apologise for taking up so much space - I am, etc.,
Manchester, April 22 1922.

V. O'Neill

I have never tried two-man spring winding, and imagine it could be a mite awkward. However, I have never tried to do anything with 2-inch springs such as are used in the BC and the Edison Triumph, and would think you would certainly need more than one pair of hands. - Ed.

10-in. 2/6

12-in. 4/-

GUARDSMAN RECORDS

FOR MARCH, 1922.

1170 { *Tuck me to Sleep*, Fox-trot
 { *The Hula Blues*

Played by *Harry Raderman's Orch.*

1171 { *When the Honeymoon was over*
 { *Tuck me to Sleep*

Sung by *Mr. Sam Ash*, Tenor

1172 { *Peggy O'Neil Waltz*
 { *That Haunting Waltz*

Played by

The Waldorf Astoria Dance Orch.

1173 { *Honolulu Honey*
 { *Sweet Hawaiian Girl of Mine*

Sung by *Messrs. Hart & Shaw*, with
Hawaiian Guitars.

1174 { *Sunflower Dance*, Fox-trot with
 { Whistling

 { Played by *The New Jersey Dance*
 { *Lucky Dog* Orch.

 { Played by *Lannin's Dance Orch.*

1175 { *Always Gay*, Schottische
 { *L'Amour Suzon*

Played by *The Guardsman Dance Orch.*

Sacred Records, All Sullivan's Operas, Bell Solos,

Accordeon Solos, Hawaiian Guitars, &c., &c.

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PRESIDENT'S PROGRAMME

The August meeting took place on 22nd at the Eccentric Club. This was the President's evening and as usual he brought along his superb Edison Idelia phonograph and in addition an Edison Opera.

For our entertainment he reproduced, as far as possible, two halves of two recitals of former days. The first (to which the first part of our meeting was devoted), was Part 1 of a programme given at a meeting of the West London Phonograph & Gramophone Society at Bellomo's Restaurant, Chiswick, W, on 24th April, 1913. It was entitled "A Genuine Edison Night", the word 'genuine' presumably meant to indicate that only Edison products were used, and to avoid any confusion with Edison Bell.

These programmes were originally given under the auspices of the Edison Company with W. Denville-Simmonds in the Chair.

Of the twelve items of the West London programme George was able to give us eight of the originals and four substitutes. The artists heard included Orville Harrold, Charles Daab, Blanche Arral, Peter Dawson, Irving Gillette, Albert Spalding, Collins & Harlan, Alexander Prince and some band records.

The second programme reproduced (in the second half of our meeting) was Part 2 of one which was given by the South London Phonograph & Gramophone Society at the Bell Hotel, 126 Upper Tooting Road, SW, on 24th May, 1913. This programme was also entitled "A Genuine Edison Night".

Here again we had eight of the original twelve records and four substitutes. The artists heard in this part of the programme included Ricardo Martin, Ferdinand Himmelreich, Pike & Dawson, Marie Rappold, Albert Spalding, Charles Daab, Billy Williams, Fred van Eps, Orville Harrold, Harry Lauder as well as several instrumental and band records.

All the records played were direct recordings and were crystal clear. The two machines taking turns to play alternate selections. One of the records played in the first half was of a song from "The Count of Luxembourg" sung by Elizabeth Spencer, This drew forth spontaneous applause; no doubt for the beauty of the singing combined with the excellence of the recording and reproduction.

The President's night is usually the most important cylinder recital in our calendar (and, regrettably, sometimes the only one) and is very much appreciated.

In closing he stated that he would go on playing these cylinders until he was too old to wind the machines, after which he would hand over the material to the Society's archives. A noble gesture and an important precedent. For this, and for a thoroughly enjoyable recital, our heartfelt thanks to our esteemed President, George Frow.

JMcK

New Players for Old Records

by Denis Harbour.

It seems to be a popular belief that early recordings cannot be reproduced successfully by electronic means; while this is not true, there are some pitfalls. As recording standards vary so widely, equipment often has to be comprehensive, consisting of a turntable with a wide variation of speed, sometimes a very long reproducing arm and a number of different stylus assemblies. This would hold true in the case of a society, say, needing equipment to play whatever may appear at particular meetings, or the collector who must have a go at everything he can get his hands on. Fortunately most enthusiasts tend to specialise, but even so, the "78" man will still need a range of heads if he is to reproduce or dub mechanically-recorded discs made over a long period and by a number of separate firms.

The following notes apply to any pre-electric recordings, be they disc or cylinder. Those not possessing the necessary electronic knowledge can usually find a friend to construct the circuits for a few pounds. The friend may end up a collector himself. All the circuits described can be built on Veroboard, and components can often be taken from old radio chassis or surplus units. The only rare component is the inductance in the 'dip' circuit. This can be wound by any company specialising in transformer and coil winding, to be found all over the country.

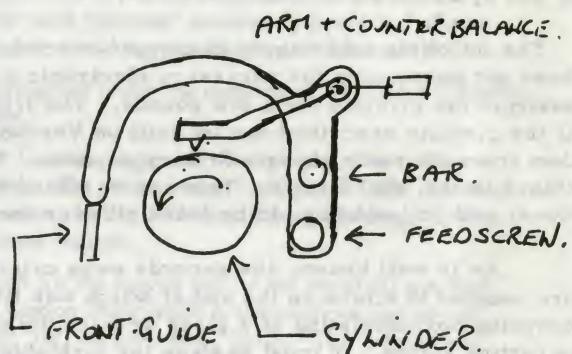
1. As is well known, the records were originally recorded using some kind of horn coupled to a tube on the end of which was fitted a kind of soundbox (termed a recording box) consisting of a glass or mica diaphragm coupled via a stylus-bar to the cutting stylus. In most designs the turntable or cylinder bearing the wax was arranged to move under the stylus, the horn being fixed.
2. There are pronounced resonances in the horn, tube and recording box, of air, and each moving part also had pronounced resonances, no damping of any kind being used, as this would waste mechanical energy. There were no standards: each machine was different and experiments took place most of the time. Therefore we can only guess at the appalling frequency response - a very peaky one within the limits of around 200 - 4,000 cycles per second.
3. It follows that any purely mechanical means of reproducing the records suffers from the same problems - the pronounced resonances inherent in the reproducing soundbox and associated tone-arm and horn. If it were possible to design these with the worst peaks as inverse to those of the recording, the reproduction would be better, as cancellation would take place, but one can only compromise as each recording is individual in itself. Even so, the wear on old recordings would be excessive, and if one is to preserve them for the sake of posterity, a purely electrical means of reproduction should be used, as far as possible.
4. Mention has been made by one member of a "Regenerative system", without details. The recordings I listened to some time ago were peaky in the extreme, which seemed to indicate that the reproducer was adding to the peaks in a number of places. The equipment probably consisted of some kind of diaphragm either air-coupled to a microphone capsule, or mechanically coupled to a generator. It is not

possible to obtain very good results with this method, although it may be enhanced with the use of a graphic equaliser.

5. What is needed is an electro-mechanical generator (i.e. 'pick-up') with small, lightweight moving parts of low mass (low mass for low wear of both record and stylus, and to keep mechanical resonance outside the audio bandwidth); the cantilever fitted with a reproducing stylus of correct dimension. Discs are relatively easy; a cylinder presents greater problems. Some years ago I devised a cast arm that could replace the carrier-arm on an Edison machine. On a single pivot was a lightweight counterbalanced wooden arm fitted with a pick-up in the manner of a modern record-player. In this case the actual pick-up was hand made, using a small vertically moving armature. At the time, machining was a problem and the prototype was not used beyond one or two experiments. Although the sound was excellent, the Society wanted the provision of mechanical reproduction so another method was used; that of coupling a crystal to the mica diaphragm, a solution leaving much to be desired, but easier to convert.

It is possible that a modern stereo cartridge could be used, if necessary, limiting the movement of the cantilever with a tiny pad of damping material that is temperature-stable. The problem here is that, once modified to carry a tip of the correct dimensions, which is expensive, the cartridge may be damaged by playing a cylinder that is out of round. There must also be a little lateral movement in the reproducing arm, as well as a very free vertical movement. A moving iron cartridge of the more robust type would stand a better chance of withstanding rough treatment than a piezo or ceramic one.

6. Whenever experiments have been conducted along these lines by people without electronic knowledge the results are often very disappointing. This is because the output signal of the home-made reproducer has been connected to a wide band amplifier, possibly also equalised for modern recordings! This would give some 20db lift at very low frequencies (20 cycles) to a signal consisting largely of mechanical noise (i.e. springs whirring and the large output generated by the almost certainly eccentric cylinder causing the reproducer to bob up and down. A little thought will show that any kind of amplification outside the desired band width is not only unnecessary but strictly taboo. A high-pass filter must be provided so that nothing below 200 cycles, say, (this to be decided) will be amplified, and also a steep-cut filter so that nothing above 4,000 cycles (also to be decided) would pass into the amplifier. A number of frequencies can be selected at either end, all the better. You now have something within the limits of early recording. Amplification outside this restricted band can only result in noise. What is left is still fairly 'peaky', however. A simple solution is to



find at what frequency the standard reproducer peaks - not easy without measuring equipment - and take this as a point of reference. It will probably be around 2.5 - 3KH (2,500 - 3,000 cycles). If a dip is arranged of perhaps 10db at this frequency that is not too sharp a 'Q', then good results may be expected. A variable resistor placed across the tuned circuit will alter this Q as desired by flattening out the peak into a 'bump'. A better method might be to have a few filters within this band width to be set during a listening test. A graphic equaliser could of course be used here, although most of the facilities would not be used if a standard type were to be purchased, which would be very expensive for this application alone.

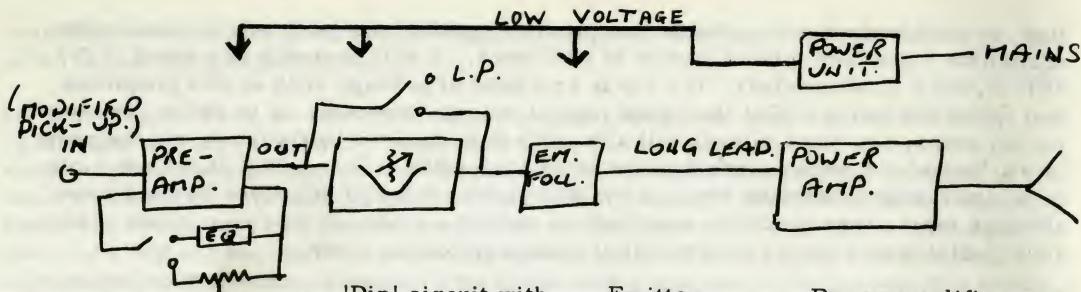
Heavy old-fashioned pick-ups should not be used for reproducing old recordings; these should be relegated to a collection or thrown away. The argument in their favour is that even the worst of them would be better than the acoustic soundbox from a mechanical damage point of view, although this can still be great. However they can be pressed into service by those who do not care what happens to their record collection once they are dead.

Thorns or fibre needles are often used on heavy soundboxes. Wear (as opposed to damage) can be great, as, magnified, they are like a miniature mop pushing along a kind of carborundum powder (dust). On the other hand they flex when the mass of the moving parts of the reproducer is too great to follow the the modulations in the groove, so that serious mechanical damage to the groove is often avoided. They should not be used.

Far better, once experiments have proved successful, to use a medium-priced heavier (disco) quality cartridge and have a stylus of the correct type, mounted on a plug-in cantilever assembly. A number of these can be adapted or modified for different groove widths. Expensive perhaps, but better than ruining one's precious collection. It is not as though you have to order them all at once.

The electronic chain may consist of:

- 1 A magnetic pre-amplifier with the equalisation removed and rendered "flat" or switchable. (By switching out components in the chain the system can be used also for modern recordings.)
- 2 A steep cut "high pass" filter arranged at say 200Hz.
- 3 A variable "Q" dip circuit. This can be arranged around one or two transistors as suggested. For simplicity one dip frequency only may be chosen.
- 4 If the latter is arranged with an emitter follower output, a long lead may be used to connect this to the main amplifier, leaving the equipment described (being self-powered) to be mounted within the reproducing machine.
- 5 If this is used with an amplifier with unequalised input (flat, radio or auxilliary) and provided with a steep cut filter at 4Kcs, you will enjoy old records as never before, knowing that each playing is a slower process towards the dust-bin. A final point: a diamond tip is essential; Never be tempted to use sapphire.



Select for req gain.
 Pre-amplifier (Eagle etc.) modified to switch in or out for standard l.p. records. The feedback loop must be retained.

'Dip' circuit with variable control.
 May be replaced with graphic equaliser if desired.

Emitter follower circuit.

Power amplifier with steep cut filter (in or out) incorporated.
 (Valve leak etc.)

THE HILLANDALE NEWS is published by THE CITY OF LONDON PHONOGRAPH AND GRAMOPHONE SOCIETY.

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\$12.00 per year Airmail

VICTORIA, AUSTRALIA. Details from C. Gracie, The Post Office, Cavendish, Victoria 3408, Australia.

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